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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09.517,258	03.02.2000	Kent Deshotel	9468.001	4762

7590

09.11.2002

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EXAMINER

PITTMAN, ZIDIA T

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 09/11/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/517,258

Applicant(s)

DESHOTEL KENT

Examiner

Zidia Pittman

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 30-43, 63-67 and 69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 30-43, 63-67 and 69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15, 30-43, 63-67, and 69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regards to claims 1, 9, 30, 38, and 63, the limitation requiring "said pressure applicators configured to extend *behind* said source of electric current" is indefinite. It is unclear to the examiner the exact positioning of the pressure applicators with reference to the source of the electric current. "Does *behind said source of electric current* refer to the same plane as the source of electric current or a different plane?" Clarification of this limitation is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-15, 30-43, 63-67, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guan et al (WO 88/06505).

Guan et al discloses improvements related to welding. In one application of the invention, the workpieces are held stationary during the welding operation and in this case, the restraining step is preferably performed by restraining means at both the weld zone and the third zones, the restraining means applying flattening forces. (page 5 lines 26-30) Typically, the restraining step also includes the step of applying a force to the workpiece or workpieces adjacent the weld zone. In this case the restraining means may comprise at least one load member having a pair of fingers, one of which contacts the workpiece in the weld zone and the other of which restrains the workpiece in the third zone. In one example of apparatus for the stationary welding case, three firm backup supporting bars parallel to the weld are applied under the structural elements to be welded. One of them is located in the center right under the weld. The other two supporting bars are symmetrically located on both sides of the central backup bar. (page 6 lines 1-14) The invention may be applied to a variety of different weld situations but is primarily of use for the butt welding of plates as well as longitudinal butt welding of cylindrical or conical shells. (page 7 lines 12-15) Fig. 1 illustrates the case of a low stress and non-distortion (LSND) welding method for a longitudinal butt joint between a pair of metal sheets. In this figure the welding heat source is illustrated schematically. To prevent the workpieces from transient out-of-plane buckling during local preset

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heating and welding, flattening forces (P_1 , P_2) are applied. P_1 is applied as close as practicable to the welding heat source and P_2 is applied as close as practicable to the area preheated to a higher temperature but in a third, cooled zone. (page 10 line 34 – page 11 line 11) The LSND welding process may be carried out with many known welding heat sources, e.g. gas flames, electric arcs, high energy density beams (laser beam or electron beam, etc. (page 17 lines 3-5)

Flattening forces on the workpieces on both sides of the weld are provided for by two opposing rows of hinged double finger clamping, holding the workpieces firmly against both the central backup insert and the side supporting bars. These three backup and supporting bars could be either machined as one integrated body or separately manufactured and assembled. The upperside surfaces of the insert and supporting bars should be machined to coincide with the proper shape of the structural elements to be welded. Thus, each finger clamps a part of the workpiece adjacent the weld and in the third zone of the temperature profile adjacent the second zone.

Figures 14-16 illustrate schematically part of apparatus for continuously welding a joint between a pair of planar workpieces, the joint being indicated at 32. The apparatus includes a lower support member and an upper support member. The upper support member carries a welding torch together with a pair of roller support members having a generally trapezoidal cross-section and each carrying on opposed elongate faces a set of rollers. The lower support also carries a pair of support members similar to the members with which they are aligned, each support member carrying a respective plurality of rollers. (page 19 – line 18 – page 20 line 8)

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In operation, the two workpieces are tack welded together to define the joint and the temporally joined workpieces are then presented to the junction between the rollers. The space between these rollers is chosen so that the workpieces are restrained from out-of-plane movement but are not nipped so that they can move between the rollers. The workpieces are then moved through the rollers towards the welding position during which they pass in series over the cooling and heating stages described above. In this way, the required temperature profile across the joint is created within the workpieces by the time the welding position is reached. Welding then takes place with the rollers preventing transient out-of-plane buckling movement. (page 21 lines 4-18)

An example of a stationary welding system for welding a pair of cylinders together is illustrated in Figure 17. As can be seen in the figure, two cylinders are butted together to define a joint. (page 21 lines 32-35)

Guan et al does not explicitly teach pressure applicators configured to extend behind the source of the electric current, wherein at least one of the pressure applicators is horizontally or vertically positionable, or the step of applying pressure to the plates is at least 18 or 36 inches behind the source of electric current. Guan et al does discuss in detail positioning of the pressure applicators with reference to the weld zone. It is the examiner's position that the positioning of the pressure applicators will be determined by one with ordinary skill in the art for optimum performance.

At the time of the invention, it would have been obvious to one having ordinary skill in the art to modify the teachings of Guan et al in order to overcome the shortcomings of existing methods for controlling welding stresses and distortions.

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Response to Arguments

Applicant's arguments with respect to claims 1-15, 30-43, 63-67, and 69 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

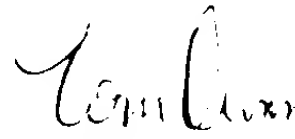
Kasuya et al (USPN 5,550,347), Hazelhurst (USPN 3,624,341), and Anderson (USPN 3,182,179) are cited as of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zidia Pittman whose telephone number is (703) 305-1248. The examiner can normally be reached on Monday – Thursday and alternate Fridays from 8:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn, can be reached at (703) 308-3318. The official fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718. The unofficial fax number for art unit 1725 is (703) 305-6078.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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7/29/02


TOM DUNN
SUPERVISOR OF EXAMINERS
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